THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXXV. THURSDAY, JANUARY 24, 1867. No. 26.

A CASE OF ASTIGMATISM.

[Read before the Boston Society for Medical Observation, November 19th, and communicated for the Boston Medical and Surgical Journal.]

By GUSTAVUS HAY, M.D., of Boston.

WHEN consulted for advice by a patient affected with astigmatism, we have first to recognize the affection; secondly, to find the directions of the meridians of greatest and least refraction, which are generally perpendicular to each other; thirdly, to find the refractive power of the eye in each of these meridians; lastly, to equalize these two different refractive powers by means of a cylindrical glass properly placed and combined with such a spherical glass as to enable the eye to work easily at the required distance.

Among the various means of recognizing this defect and the directions of the principal meridians may be mentioned the ophthalmoscope, which, when astigmatism is present, gives in the upright picture an image of the nerve-disc more magnified in the direction of the meridian of greatest refraction than in the direction at right angles to this, and *vice versâ* in the inverted picture. As the shape of this latter picture would be affected by an oblique position of the convex lens, such obliquity should be avoided. This means of diagnosis has been specially described by Schweigger,* who thinks that by it degrees of astigmatism as small as $\frac{1}{20}$ or $\frac{1}{30}$ may be recognized.

Another test, perhaps more delicate, though depending on the perceptive power of the patient, is given by the optometer, as described in a case to be reported.

Mr. B., æt. 23, besides an imperfection in the right eye, the result of a wound of the sclerotic close to the cornea some fourteen years previously, was affected with compound myopic astigmatism in both eyes.

By means of an optometer, consisting of a convex lens of four inches focus, through which the eye to be tested looks at a movable card, on which fine lines are drawn radiating from a point in various

* Archiv für Ophthalmologie, 1863. Vorlesungen über den Gebrauch des Augenspigels, Berlin, 1864.

directions, it was found that for the right eye the vertical line of the card remained distinct at a greater distance than the other lines, and accordingly it was inferred that the eye was weakest in refractive power in the horizontal meridian, the one perpendicular to the line of the card the last to become indistinct as the card was gradually removed from the eye. This appears from the consideration that this meridian, admitting of being accommodated for the distance at which the vertical line was seen distinct, could thus be accommodated for a greater distance than any other could be and therefore was weaker than the others.

An approximative value of the refractive power of the horizontal meridian was also given by the optometer,* viz., myopia $\frac{1}{40}$.

Having learnt thus much, the next step was to determine this refractive power more accurately by means of vision for the distance through a narrow slit and a spherical glass. It was found that the eye, the right, without any glass had at twenty feet vision $\frac{1}{4}$; through a horizontal slit had vision nearly $\frac{1}{2}$; through this slit and concave 40 vision $\frac{2}{3}$: through the slit and concave 36 vision nearly equal to 1. From the last observation it was inferred that the horizontal meridian was myopic $\frac{1}{36}$.

To find the refractive power of the vertical meridian, which we have already seen was stronger, that is, in this case, more myopic than the horizontal, concave spherical 36 was combined with a concave cylindrical, with its axis horizontal, commencing with the weakest. It was found that concave spherical 36, in combination with concave cylindrical 30, gave the best result—vision nearly equal to 1.

It thus appears that while horizontally the eye was myopic $\frac{1}{36}$, it was vertically myopic $\frac{1}{36} + \frac{1}{30}$, $= \frac{1}{16}$, nearly.

With concave spherical 20, which the patient had been using, and which is too strong for one of the principal meridians and too weak for the other, vision was pretty good, but less so than with the combination of spherical and cylindrical as above.

By a similar examination, the other eye, the left, was found to be myopic horizontally $\frac{1}{40}$, and vertically $\frac{1}{40} + \frac{1}{30}$, $= \frac{1}{17\frac{1}{2}}$; with corresponding glasses, concave spherical 10 combined with concave cylindrical 30, axis horizontal, vision was equal to 1. Concave spherical 10 was not as good alone as when combined with the cylindrical.

It will be noticed that the cylindrical portions of the combinations are the same for the two eyes, but the spherical portions are different.

The above glasses suited for the distance, but for near objects it

* By means of Javal's binocular optometer, an instrument somewhat similar to the one described, but having, besides other advantages, an apparatus for bringing before the eye to be tested a series of concave cylindrical glasses of various powers and with their axes in the desired position, that is, parallel to the meridian of least refraction, we can ascertain directly the difference of the two principal meridians, this difference being equal to the refractive power of the glass, which enables the eye to see all the lines of the card equally distinct. For an account of Javal's method, see *Annales d'Oculistique*, 1865.

seemed better to make the far point 36 inches, it being found that the right eye, somewhat imperfect from the previous injury above mentioned, read more easily with the cylindrical $-\frac{1}{30}$c alone than with the glass for distance.

For the left eye the glass to make the far point 36 inches would be concave spherical 14 in combination with concave cylindrical 30, or, as shortly written, $-\frac{1}{14}$s ⌒ $-\frac{1}{30}$c ; but as through this the letters appeared too small, a weaker spherical, 16, was adopted instead of the 14.

After selecting the glasses it remains to have them carefully set; a matter of considerable nicety, the cylindrical axes requiring to be properly directed, and the eyes to look nearly perpendicular through the centres of the glasses.

In the above case we found the weakest meridian to be myopic, and in consequence knew the strongest to be more myopic. If in any case we could determine the strongest meridian to be hypermetropic, the weakest would be more hypermetropic, and with this knowledge we could proceed in a manner analogous to that described in the case reported, using convex glasses instead of concave, and in the determination of the refraction of the strongest meridian by means of a slit and convex glass, giving the preference to the strongest convex with which the best vision in the distance could be obtained.

CASES OF CROUP.

[Read before the Boston Society for Medical Observation, December 17th, 1866, and communicated for the Boston Medical and Surgical Journal.]

By Charles D. Homans, M.D., of Boston.

Case I.—F. S., aged 5 years, was brought to the City Hospital, Sept. 19th, at about 11 o'clock, A M. She had been hoarse the day before, had coughed somewhat, and complained of soreness of the chest. She had been seen by Dr. J. G. Blake, on the 18th, who did not then regard her as very sick, and found no membrane in the fauces. Two other children of the same family, living in a damp, badly ventilated lodging at the South End, have died of the same disease.

On entrance, she was blue in the face, gasping for breath, entirely unable to speak; death seemed imminent; the soft palate and uvula, with the tonsils, were covered with a soft, dirty-white exudation. She was etherized and tracheotomy immediately performed, the tube being inserted about two inches above the sternum; a small piece of grayish false membrane was pulled from the trachea through the wound at this time. Very shortly after the operation her countenance recovered its color and respiration became less labored. She was placed in a room filled with steam, and soon went to sleep. At 12½, P.M., her pulse was 144, strong; respirations 34, easy; at 2,

P.M., pulse 156, at 4, P.M., 138, and continued at about that rate all night. She slept for about two hours, having taken seventy drops of tincture of hops. During the afternoon, she took egg-nog at short intervals, about one drachm at a time, and in the evening beef-tea was taken with avidity; thirst was very great. Tube cleansed at midnight.

Sept. 20th.—At 2, A.M., she had a momentary spasm of the muscles of the limbs; at 6, she seemed hot and restless, and the beef-tea and stimulants were omitted. At 7½, quiet; pulse 126, firm; respiration easy. The pulse was steady at 125–130 during the day; she slept considerably; general appearance better, though the skin is rather dusky. She drank one half pint of milk during the day, water *ad libitum*, and took nothing else. The air was kept exceedingly warm and moist by means of a faucet in the steam-pipe by which the room was heated. Tube cleaned four times. Her tongue was clean at the edges, but covered in centre and back with a thick, whitish brown fur; respiration rude all over chest, with many coarse râles.

21st.—Complexion dusky. Slept from three to four hours in the night. Pulse 130, good. Takes milk, beef-tea and egg-nog.

22d.—Slept well. Pulse 120, not very strong. Can force air through the mouth when the tube is corked, but cannot inspire.

24th.—Countenance still dusky. Has coughed up through tube several times a thin creamy fluid. Pulse rather feeble. ℞. Syr. ferri iodid., gtt. x., three times daily.

26th.—Coating of fauces clearing off. Pulse 130.

27th.—Creamy discharge increased; it comes through and around the tube. Countenance bluish.

Oct. 2d.—Still unable to inspire through mouth and nose, but can force air out through glottis with difficulty.

4th.—Countenance somewhat less dusky; discharge from tube less.

8th.—Was able yesterday, for the first time, to breathe by the mouth and to speak, though very hoarse. The inner tube has been removed and the outer left in, but corked, the air passing through openings made for the purpose. From this time she slowly improved, gradually gaining strength and losing the dusky hue of her skin. The hoarseness continued in some degree as long as she remained in the hospital. Oct. 15th, the tube was removed from the trachea, and the opening closed very quickly. Nov. 1st, the use of steam was given up, and on the 17th she was discharged, well.

Case II.—J. S., æt. 6½ years, sister of the preceding, was brought to the City Hospital in the morning of Sept. 22d, having had a cough, with hoarseness, since the 16th inst. There was a white fibrinous exudation on the back of the fauces and on the tonsils, her tongue was covered with a smooth, white coat, her appetite poor, her countenance natural, but with an anæmic look. Her bowels were regular; pulse 105, good; respiration easy, but noisy; cough croupy, not

very hard, but with three or four paroxysms daily. Her voice was quite indistinct, and at evening nearly gone. She was placed in the same room with her sister, under the influence of steam, and had the same diet—beef-tea, milk and egg-nog. In the evening the pulse was 120, not strong; the respiratory murmur was audible all over the chest; there were sonorous and mucous râles everywhere, but principally in left back. This state of things continued for four or five days. On the 24th, ten drops of the syrup of iodide of iron were ordered her three times a day; and, on the 26th, the membrane had disappeared from her throat, and she appeared generally better. Her voice returned on the 28th, though very hoarse. Oct. 2d, she had much improved in every way, though still quite hoarse. She was moved to the large female ward with her sister on the 1st of November, and was discharged well, Nov. 17th, her voice being nearly natural.

Case III.—S. M., æt. 8 years, was brought to the City Hospital at 7¾, P.M., Oct. 2d. Had been sick a week with symptoms of croup, and had suffered from excessive dyspnœa for thirty-six hours previous to entrance. Her pulse was about 130, dyspnœa extreme, countenance livid, skin cool, and she was unconscious. The trachea was immediately opened, the operation occupying but a few minutes, but during that time the respiration had ceased, the face became very livid, and the pulse scarcely perceptible. Air was blown in and sucked out of the lungs by means of a catheter in the wound, and the tube inserted as soon as possible, respiration soon becoming regular and easy. She was removed at once to the steam room. Fifteen minutes after the operation her pulse was 120, but it grew more rapid afterwards, and in two hours was 162; respirations 48; her consciousness, however, had returned, and she was able to sit up and swallow water. Milk-punch and beef-tea were directed for her to drink, or to be given by enema if necessary; also, ʒ i. of a saturated solution of chlorate of potash every two hours.

Oct. 3d.—Seemed very weak. Respirations quiet, about 30; pulse 130. There is a grayish coating over tonsils, posterior fauces, uvula and back of tongue, said to be less general than before entrance. A tenacious, frothy mucus is coughed up through the tube.

4th.—Had a good night. Expectoration as above, more abundant. Upper part of neck, especially on left side, is much swollen.

5th.—Neck considerably swollen; no respiration by mouth; tube was removed, on account of irritation, with relief; tongue is entirely covered with a thick white membrane; fauces as before; pulse 120.

6th.—More expectoration, more easily raised; respiration easy, through opening in trachea; tube has not been re-inserted, as it did not seem necessary. There is an erysipelatous blush about the wound.

7th.—Some appetite; otherwise as before.

8th.—Wound is covered with a white coating, similar to that on

the tongue. Erysipelas fading. Patient sits up in bed and reads. Takes food with relish.

Oct. 10th.—Membrane gradually disappearing from wound and mouth. Can expire quite forcibly through the mouth.

12th.—Spoke aloud to-day for the first time; quite hoarse. Neck much less swollen; wound in trachea still open, but gradually filling up with healthy granulations.

15th.—Wound closed, so that no air comes through. Voice still quite hoarse; eats and sleeps well; countenance of good color; membrane nearly gone from the mouth.

16th.—Steam shut off. Patient dressed.

21st.—Wound filled with granulations, even to the surface of the skin; edges brought together by adhesive plaster.

Nov. 3d.—Discharged, well. Tonsils somewhat enlarged; voice still rather hoarse, though improving every day.

Within the past three months I have seen two other cases of croup, for the relief of which I performed tracheotomy.

One was a child of two years, who had been sick for a week without seeing a physician; the gentleman then called in sent for me in consultation. I found the child moribund, apparently, respiration exceedingly difficult and very noisy, voice gone, countenance livid and pulse very frequent. The trachea was opened as soon as possible, but the child died shortly afterwards.

The other case was in a child 2½ years old, who had had croupy symptoms for three days, and had been treated by steaming the air and otherwise very rationally. When seen by me, there was lymph on the tonsils, neck somewhat swollen, countenance somewhat dusky, respiration labored, cough very hoarse and voice a whisper; there had been but very little sleep for forty-eight hours. The trachea was immediately opened and the tube inserted without any trouble, the child being etherized. Immediately after the operation the child dropped into sleep which lasted for several hours, the breathing became less labored, and recovery seemed possible; but the next day the symptoms became worse, though never so bad as before, and the little patient died of exhaustion on the third day after the operation.

In these cases the recoveries corresponded to the general rule that the older the child the more apt it is to get well, if attacked with membranous croup, more especially after tracheotomy has been performed. There might be a question whether the first two cases ought not to be called diphtheria, but there was no symptom of the latter disease present which did not also belong to croup. The fact that four children in the same family were attacked with the same disease, of whom two died, would seem to point to a disease highly infectious or contagious. In many cases, however, the diagnosis is very difficult between the two diseases; in fact, it seems to me impossible sometimes to say which is the disease we have to treat, there being no entirely characteristic symptom in one which may not occur

in the other. The French include both these affections under one name—"diphtherite"—and it certainly seems to me much more philosophical than to have two names for cases which differ more in degree than in anything else, the diagnosis of which is so often very uncertain. The third case reported is quite interesting, as the child was very low when operated on, and it was the opinion of the physicians and surgeons of the Hospital, many of whom were present accidentally, that the case would be fatal; in fact, artificial respiration was necessary: this was done by Dr. Buckingham, who had seen the patient before her entrance to the Hospital. The long persistence of the hoarseness and the dusky hue of the countenance in the first and third case is also worthy attention.

CASE OF PHLEGMONOUS ERYSIPELAS, FOLLOWING THE HYPODERMIC INJECTION OF A SOLUTION OF SULPHATE OF MORPHIA.

By J. W. Merriam, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

A few weeks ago, while suffering from an attack of lumbago, resulting from exposure to a draught of cold air on board steamer, I took an hypodermic injection of a solution containing half a grain of sulphate of morphia. The injection was made over the *supinator longus* of the left arm. Care was taken to avoid puncturing a vein, and not even a drop of blood followed on withdrawing the syringe. The next morning the arm was somewhat sore to the touch, and the neighborhood of the wound a little more red than usual, but no importance was attached to these symptoms, as they had frequently occurred before in my own person, and had disappeared without any serious results. I did not look at the arm again till the following day (about forty-eight hours after the injection), when I noticed around the puncture an ecchymosis of the size of a quarter of a dollar, sharply defined, of a bright red color, which did not disappear on pressure. The forearm was considerably swollen and inflamed, and began to assume an erysipelatous aspect. It was kept painted with tincture of iodine for the next twenty-four hours, until on the following day, Dr. N. F. Martin, the Post Surgeon at Fort Mojave, discovered the presence of matter, and substituted a poultice for the iodine. In the course of a couple of days a free opening was made, the matter evacuated, and the poulticing continued.

The whole back of the forearm was now exceedingly tender, and the skin of a bright red color, tense and shining. A wash of acetate of lead and opium removed all the unfavorable symptoms; the wound was dressed with Turner's cerate, and the case rapidly pro-

gressed to a favorable result. Tincture of the chloride of iron was taken internally throughout the attack.

I have thought it worth while to report this case, as it illustrates the fact that erysipelas may follow the most simple operation, even when performed upon a person whose general health is robust, while more important operations, under apparently the same circumstances, may not be followed by any such consequences.

I do not know why erysipelas should have occurred in my case, but I should not be deterred, in consequence of it, from resorting to similar treatment again through fear of a like result.

In April last, I submitted to a painful operation, skilfully performed by Dr. Coolidge, of Boston, after which, during a period of seven days, fifteen different hypodermic injections of Majendie's solution were given me, with no more ill result than a slight ecchymosis of a diffused character, which passed through the usual changes of color noticed after a bruise, and which never even threatened erysipelas.

Fort Mojave, Arizona Territory, Dec. 1, 1866.

ATROPINE AND MERCURY IN ACUTE IRITIS.

By T. Pridgin Teale, Jr., M.A., Surgeon to the General Infirmary at Leeds.

During the last two years and a half I have recorded in a tabular form the cases of acute iritis which have come under my care, in order to test the value of certain views of treatment which I had arrived at from the observation of such cases previously to this period. The exactness of the results is so marked, and the sequence of events so definite, that I feel justified in relating the cases to the profession, and in deducing from them certain principles of treatment, which, if not new, may at any rate not be generally known or acted upon in medical practice.

In speaking of iritis, in this paper I exclude from consideration all cases of traumatic origin, all those which are secondary, i. e., caused by extensive adhesions of the iris to the capsule of the lens left by previous attacks, all subacute forms travelling forward to the iris from the deeper structures, and all cases occurring in children. These are excluded in order to simplify the inquiry, and restrict it to those acute forms, generally syphilitic, which occur in the previously healthy eye of the adult, and which, if neglected, rapidly endanger vision.

For treating such cases many remedies have been and are still employed—venesection, leeches, blisters, opium, purging, belladonna, turpentine and mercury. Some surgeons use many of these in combination, others depend upon some single drug, others denounce particular drugs as injurious or useless. Some claim opium as a cure for all cases, with some belladonna is omnipotent, with others

mercury and bloodletting are indispensable. In this variety of practice where lies the truth? Can we arrive at it? I trust that the following records will be accepted as an instalment in this inquiry, as they have been carried out in order to test the relative value of atropine and mercury, to ascertain how much each remedy can do, and to determine if possible the most effectual way of employing them.

The cases here recorded appear to me to justify the following conclusions and principles of treatment.

1. Iritis can generally be cured, quickly and perfectly, by atropine alone, or by atropine and mercury combined, without the aid of other remedies. How far opium, blisters, leeches, and venesection aid and accelerate progress I have not yet tested, wishing in the first instance to determine the value of the remedies under consideration, and then to make the results herein obtained a starting point for further inquiry.

2. The presence or absence of syphilis does not affect the question of treatment.

3. Many, perhaps one-half, of the cases of iritis, *whether syphilitic or not*, can be cured by *atropine alone*.

4. Those cases in which atropine fails to dilate the pupil in twenty-four or forty eight hours require mercury. In occasional cases the application of leeches renders an eye susceptible of dilatation which at first was unaffected by atropine.

5. When mercury is required, it ought to be introduced into the system rapidly.

6. If the system is to be affected by mercury, the mercury ought to be introduced by *the skin, not* by the *stomach*. When this drug is introduced by the stomach, the digestive powers are depressed at the very period when their healthy function is most needed. When introduced by the skin, its full remedial effects are obtained without any impairment whatever of the powers of nutrition. It is my rule never to introduce mercury by the stomach when I wish to obtain rapidly the constitutional effects of the drug.

7. In those cases which require mercury it is sufficient to render the gums slightly tender. When the gums are even slightly affected, we have therein evidence of the introduction of mercury into the system in quantity sufficient to turn the scale in favor of health, and carry the case to a successful issue. Therefore, the moment we find the gums undoubtedly tender, or beginning to be tender, we may suspend the drug.

8. In most cases the constitutional effects of mercury, indicated by tender gums and improvement of symptoms, may be obtained on the second, third or fourth days, provided the patient be confined to bed. Absorption of mercury by the skin appears to be *much more* rapid when the patient is confined to bed than when he is allowed to go about as usual.

9. Atropine should be used during the whole period of treatment, except where it causes great pain or increases conjunctival irritation, in which case it may be *temporarily* suspended, or dissolved in glycerine and applied to the skin.

10. That in cases requiring mercury the coincidence of tenderness of gums, of relief from pain, and of the action of atropine on the pupil is almost absolute, even to an hour or two. Perhaps in cases more severe than those recorded, with great effusion of lymph, the visible effects of atropine may be delayed to a later period. On this point I do not possess evidence.

Let us now inquire how far these conclusions are justified by the cases, and what are the general results of treatment.

Treatment.—Of the twenty cases, eleven were treated by atropine alone, nine were treated by atropine and mercurial ointment combined. In one or two cases, a dose of Dover's powder was given when the pain was excessive, and in some others salines were given during the application of the mercurial ointment if the skin was hot and not perspiring. Leeches were used, I believe, in three cases only. Two cases had taken mercury before coming under my care.

Question of Syphilis and its relation to Treatment.—Thirteen cases were undoubtedly syphilitic. Of these, five required mercury; eight recovered under atropine alone. In seven, syphilis was either denied or not made out. Of these, four required mercury; three were cured by atropine alone.

Rapidity of Mercurial Effects.—Of the nine cases in which mercury was required, one used the ointment twenty-four hours; a second twenty-four hours, having previously taken blue pill five days without benefit; a third and fourth used the ointment two days, a fifth and sixth three days, a seventh and eighth four days, the ninth twelve days. So that of nine cases of iritis in which mercury was used, only one required the application of the ointment for more than four days.

Rapidity of Recovery.—Of the twenty cases, seven recovered good sight and pupil within two weeks; one within a "short time"; five within three weeks; three within four weeks; three within eight weeks; one within three months; the twentieth was relieved from pain, with partial recovery of sight.

Perfection of Sight.—Fifteen read No. 1 Jaeger, three (including the second eye of one case) read No. 2, two read No. 6, one could read No. 18.

Perfection of Pupil.—Twelve recovered with a perfectly active pupil free from adhesions, in five there were slight or single points of adhesion, in one there was closed pupil, and in two the condition of pupil is not recorded.

Duration of Disease before Treatment.—In eight the disease had existed not more than a week before coming under my care, in four

not more than two weeks, in six less than two months, in one three months, and in one three months and a half.

Condition of Vision before Treatment.—In six cases vision was limited to perception of shadows; in two it was described as dim; in two the patient could not read Jaeger No. 20; in three the patient read No. 20; in two No. 16; in three No. 4; in two the condition of vision is not recorded.

Disappearance of Mercurial Effects.—In all the cases, although no special note is made on this point, the constitutional effects of mercury passed off in a day or two, and in none do I recollect to have met with any injurious effect whatever which could be traced to the use of mercury.

Relapse of Iritis.—In one case only have I any record of a relapse, and this relapse disappeared rapidly under atropine alone. This fact tends to confirm Gräfe's assertion, "that the principal cause of recurrence of iritis is the existence of synechiæ;" in other words, when iritis is cured with a pupil free from adhesions, it seldom evinces a tendency to recur.

Mode of using Atropine and Mercury in Iritis.—Use of Atropine.—On first seeing a case of iritis, whatever its degree, I order atropine, of the strength of two grains to the ounce, to be dropped into the eye six times, at intervals of five minutes, in the morning, and six times also in the evening. On the following day, if the pain is lessened and the pupil is beginning to dilate, I conclude that the case is slight, and that atropine alone will cure it. If, however, the pupil is affected, and the symptoms unabated, I commence mercurial treatment without delay.

Use of Mercury.—The patient is ordered to lie in bed, to wrap round each arm a broad piece of flannel, well smeared with mercurial ointment, and to wear this mercurial bandage until the gums are slightly tender, a small quantity of fresh ointment being added every evening. It is not necessary to *rub in* the ointment. I suspect that the "rubbing in," by producing irritation, impairs the absorbing power of the skin.

Discontinuance of the Mercury.—As soon as the symptoms of the disease begin to abate, or the gums begin to be tender (and these two conditions are generally coincident), the mercury is discontinued. In none of these cases has mercury been given by the mouth (except in two cases, which had been so treated before coming under my care), and in none has the ointment been rubbed in.

Discontinuance of the Atropine.—As soon as the pupil is fully dilated, as far as any adhesions will permit, the instillation of atropine is reduced to once or twice a day, and continued at this rate as long as redness or tenderness of the eye remains.

This mode of treating iritis coincides very nearly with that described by Gräfe (On Iridectomy, New Sydenham Society, 1859), in using atropine as the main remedy, and mercurial inunction in cases

too severe to yield to the atropine. It differs from it in dispensing with *rubbing in*, and with the use of mercury by the mouth. Mr. Dixon, in his early remarks on iritis, condemns belladonna; in his later work he speaks timidly of its use as an appendage to other treatment. The cases here recorded prove Gräfe to be correct in claiming atropine as the sheet anchor, and in making other remedies subordinate.

William Lawrence and most ophthalmic writers give mercury by the mouth, and do not mention its introduction by the skin. They speak of the coincidence of the improvement in the symptoms with the first appearance of constitutional effects of mercury, and make this the signal for reduction, not as I have done, for the entire omission of mercury.

Bloodletting, local and general, is usually urged as indispensable in iritis. That it is not so I think the foregoing cases prove. I believe, however, that local bloodletting may be a valuable addition to other means of treatment, and that it facilitates the absorption of atropine and accelerates its effects.

Note on the Action of Atropine.—Writers on iritis generally rest the credit and value of atropine or belladona on its powers of dilating the pupil, in setting at rest the muscular tissue of the iris and ciliary body, and in diminishing the risk of the formation of synechiæ. I cannot, however, but suspect that it does more than this—that it acts as a direct sedative on inflamed and congested tissues, and that much of its power depends upon its influence in contracting the bloodvessels. I cannot in any other way explain the remarkable value of this drug in many cases of ulcer of the cornea, and so-called strumous ophthalmia, a large proportion of which I treat by atropine only. Nor can I explain in any other way the immediate improvement, and rapid and complete recovery by means of atropine alone, of many cases of syphilitic iritis. That atropine does reduce the size of bloodvessels I have no doubt, having several times satisfied myself of the fact by observing the calibre of delicate vessels traversing the cornea, before and shortly after the instillation of atropine.—*New Orleans Medical and Surgical Journal*, from *London Ophthalmic Hospital Reports.*

A PILL-BOX factory in Brandon, Vt., owned by Newton & Thompson, uses two thousand cords of wood per annum, and employs sixty men, boys and girls. The factory is run night and day a portion of the year. They have in use ten of Newton's self-operating pill-box and spool machines. They have been in operation about eight years. The factory is capable of turning out about five hundred gross of boxes per day.—*Druggists' Circular.*

Bibliographical Notices.

Conservative Surgery, as exhibited in remedying some of the Mechanical Causes that operate injuriously, both in Health and Disease. With Illustrations. By Henry G. Davis, M.D., Member of the American Medical Association, &c. New York: D. Appleton & Co. 1867. 8vo. Pp. 314.

This is a handsome volume, but a little too diffuse, both in title and in text. The author aims to treat not only all the deformities usually included under the head of orthopœdic surgery, but also to comprise the pathology and treatment of fractures and dislocations, as well as diseases of the joints, and phthisis pulmonalis. And this brings us to its second fault, if fault must be found—that its author is too persistent to be agreeable, in urging his claims to priority in invention of means adapted to the ends he seeks. Thus he claims precedence in the use of elastic extension over Drs. Gurdon Buck and Swinburne (pp. 5 and 6), Louis Bauer (p. 138), David Prince (p. 160), Charles F. Taylor (p. 268), Dr. Barwell of London, and, finally, Dr. Sayre, of which latter claim more anon.

Allowing all these claims to priority to be true, we conceive that it would have been in better taste and equally effective, to have embodied them all in an introductory or a closing chapter. Particularly do we deprecate such a controversial spirit as is shown on pages 139, 161, 264, 265 and 266.

What we may not unjustly term the too great confidence of the specialist in his remedy, we conceive to be shown in such wholesale statements as the following:—

"Again we inquire what there is in a case of morbus coxarius, or in ulceration of any of the joints, to destroy life, when the treatment by '*continued elastic extension*' is practised from the commencement? We can see no reason, neither has our experience, covering as it does a period of many years, presented a single instance to lead us to doubt this conclusion. We think the time is not far distant when our professional brethren will fully agree with the statement we made in 1860, before the Academy of Medicine of this city, viz., that a patient ought never to die from the direct effect of either morbus coxarius, white swelling, ulceration of the vertebræ, or of any other joint."

Happy indeed the surgeon, or the Hospital, which could claim such results.

First, in regard to Fractures, we would notice what seems to be a very excellent mode of treating fracture of the patella, by a double extension strip coming down on each side of the foot, and the adhesives crossing each other above the patella, and covering, obliquely, the whole muscular expansion of the *quadriceps extensor femoris*. This would promise to be much more effectual than the old method by position only, since it pulls on directly and exhausts the muscular agents of displacement.

Next, on p. 33, in treating of intra-capsular fracture of the femur, stress is laid upon the line of fracture being usually oblique, and upon the existence and preservation of certain ligamentary fibres of the capsule, or the periosteum, which may remain unsevered, and afford a

nucleus for callus to become deposited around. This attachment is frequently broken by the surgeon in his examination, when greater shortening at once occurs.

On pages 80 and 81, a case is given of a young lady treated at the Massachusetts General Hospital for morbus coxarius, but considered by the author to have been chronic rheumatic arthritis, and successfully treated by extension.

On page 93, is revived the rumor of one of those accidents in treatment, which, if they occur, ought never to be published of a professional brother.

Talipes is successfully treated by continued elastic extension to overcome the contracted and shortened ligaments and muscles, and plates of ingenious and simple apparatus are given.

The restoration of *genu-valgum* seems to us to be more philosophically accomplished by the author's mode of restoring the strength of the enfeebled and deformed muscles and joints, than by any cumbrous fixed apparatus.

Dr. Davis mentions one indication of a lateral curvature of the spine with rotation, not described by others: "A person that has a decided curve of the spine with gyration, will apparently take a long step with one foot, and a shorter one with the other. This arises from the fact that the pelvis does not stand parallel with the chest, consequently one limb stands a little in advance of the other, and retains this difference in walking."

In joint-disease, rigidity of the muscles is properly insisted on as a diagnostic symptom. Mr. Cooper Forster was the first to mention the constant presence of false, muscular anchylosis in disease of the hip, we believe.

Many excellent diagnostic points of Pott's disease of the spine are given, as the following: "The child prefers quietude; is unable to join in the sports of his companions, without desisting and resting, from shortness of breath.

"He seeks at all times to support the back by placing his arms on table or chair.

"In stooping to pick something from the ground he bends both the hip and knee joints, and gradually lowers his body upright, until his hands can reach the object, when he as gradually and carefully rises to the erect posture again.

"The pain attending this deformity is peculiar, and is felt around and in front of the body, and not so much over the spine.

"Pain in the stomach is complained of when the disease is in the dorsal portion of the spine.

"Stiffness of the spine is noticed in all postures and movements.

"The patient walks more than usually erect, with the arms and shoulders thrown back."

Treatment by mechanical support is advocated, to the exclusion of the supine position; which latter we believe to be more effectual.

On the whole we may thank the author for a pretty complete monograph on his specialty; and whether all his claims to priority be allowed, or not, credit is due to him for an ingenious adaptation and employment of the extension by adhesive strips of Dr. Crosby, the use of vulcanized rubber, which has wrought a revolution in surgical apparatus, and the raising of the foot of the bed, or counter-extension

by the perineum, and extension by weight and pulley, usually ascribed to Dr. Buck.

The most unpleasant part of the book to discuss is the concluding chapter on the controversy between the author and Dr. Sayre, as to priority of discovery in the use of the splint for morbus coxarius.

According to Dr. Davis he had fully established the treatment of hip disease by "continued elastic extension," in 1856, and his cases and treatment had been published in 1857.

To use his own words, "At the close of the year 1859, there came into my office an entire stranger to me, and introduced himself as Dr. Sayre, of New York, saying that he came 'to inquire about my mode of treating Hip Disease,' remarking, 'that he had heard much about it, and would like to have it explained to him.' I cheerfully complied; explained the principle, and took him to see a case. He expressed himself highly gratified. He then wished me to see a case of his, where he had divided the tendons, which I did, and applied my splint.

"In less than three months, Dr. Sayre published a paper in the 'American Medical Monthly,' claiming as his own all these discoveries in the treatment of joint diseases. The next month he read a paper before the American Medical Association, claiming these discoveries as his own; and received congratulations on the importance of the discoveries he had made. In publishing this paper, however, he alluded to my splint."

Dr. Post, Chairman of a Committee of three Surgeons appointed by the New York Academy of Medicine to investigate Dr. Davis's mode of treatment, says, "There is no question but that Dr. Davis is entitled to the credit of having introduced this method of treatment to the profession;" "the methodical application of the treatment is due to him, and were it not for him the profession would have known nothing about it."

Comment is needless, except to say that this is a just excuse for much of Dr. Davis's acerbity.

A Practical Treatise on Diseases of the Skin. By J. Moore Neligan, M.D. Fifth American from the Second Revised and Enlarged Dublin Edition. By T. W. Belcher, M.D., Physician to Dublin Dispensary for Skin Diseases, &c. Philadelphia: Henry C. Lea. 1866.

To the busy practitioner who desires to know if anything has been done in dermatology since Neligan published his first edition, this volume would furnish interesting matter for examination. The editor seems to have carefully consulted what has been written in books and medical journals since that time, and has attached to the original matter brief statements of the views of such writers under their appropriate divisions. It makes thus a medley of opinions relative to the pathology and treatment of skin diseases which must be very confusing to the physician, and is altogether inappropriate to the requirements of the student. First comes the substance of the author arranged under the old system of classification of Willan slightly modified, with a statement of the editor's approval or dissent in many cases; and then follow short notices of the heterogeneous and contradictory opinions of modern writers, leaving a very indefinite impression of the whole subject upon the reader's mind. The book is no longer

Neligan's Treatise on Diseases of the Skin, nor does it serve the purpose of making one properly acquainted with the present state of Dermatology. The Editor has failed in attempting to combine the two projects in one book.

We notice a good many errors in the text, for which very likely the American reprint is answerable.

A Manual of Auscultation and Percussion. By M. Barth and M. Henri Roger. Translated from the Sixth French Edition. Pp. 161. Philadelphia: Lindsay & Blakiston. 1866.

This little book contains a clear and concise account of the principles upon which these all-important methods of diagnosis are based, of the physiological action of the organs to which they are applied, and of the modifications in the physical phenomena they exhibit in their various pathological conditions. We can recommend it both to student and practitioner as a reliable and convenient manual.

Notes on Epidemics. For the Use of the Public. By Francis Edmund Anstie, M.D., Senior Assistant Physician to the Westminster Hospital. First American Edition. Philadelphia: J. B. Lippincott & Co. 1866.

This useful treatise of one hundred pages appeared originally in the *British Quarterly Review*, and was published in its present expanded form to furnish information to the non-medical public concerning the nature, premonitory symptoms, and means of prevention of epidemic and contagious diseases. It is in no way intended to serve as a book of domestic medicine, but to point out the character of those symptoms which demand the immediate presence of the physician. It contains an introductory chapter on the general causes of epidemics, and the importance of the popular use of the thermometer as a test of the seriousness of any threatened disease. The remainder of the volume is devoted to an account of Relapsing Fever, Typhus and Typhoid Fevers, Cholera, Epidemic Diarrhœa, Scarlet Fever, Diphtheria, Measles, Smallpox, Whooping Cough, and Influenza.

The American Editor, Dr. William A. Hammond, has done well to re-publish the book for our people, and we hope it may have a wide circulation.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 24, 1867.

TRANSACTIONS OF THE NEW HAMPSHIRE MEDICAL SOCIETY FOR THE YEARS 1865 AND 1866.

The Transactions of the Medical Society of New Hampshire for the past two years, which have just reached us, are full of interest, and give evidence of an active, intelligent, philosophical spirit among its members, which augurs well for the professional care of the commu-

nity in which they live. The publications consist in the main of eight papers, none of which lay any claim to the ambitious title of monograph, but which are full of practical hints and suggestions, and in most instances show their authors to be well read and learned in the history as well as the science of medicine. Coming from men engaged in the active duties of their profession, in a State which does not contain any very large cities or towns, at least when compared with the large commercial centres of the country, these gentlemen have not ventured to cumber the annals of medicine by any ambitious attempts at laying down new laws, or any hasty and ill-digested views based upon a too-limited experience. Instead, they have given us good sense, sound judgment, reports of interesting cases accurately observed, a wise conservatism in discussing some of the ultraisms of the time, the whole inspired by a high sense of professional honor and accountability. We have rarely met with a collection of similar papers which contained so little that is commonplace.

The annual address for 1866, by the President, Dr. W. D. Buck, of Manchester, is a brief sketch of some of the most noticeable points in the present condition of the medical profession. It is not devoted to the too common glorification of physicians, but while it points out some of the most noted instances in which medical science has advanced of late, it refers with marked emphasis to the dark questions which still baffle our inquiries. Touching upon the different departments of medical science, the author avails himself of the occasion to give some of the practical results of his own experience. His cautions against the narrow-mindedness which exclusive attention to a specialty or an over-anxiety to do surgical operations is apt to generate are timely and wise, and illustrated by a genial humor which has a telling effect. Here is a paragraph from what he says of the prevailing mania for over-treatment of real or imaginary uterine disease; somewhat burlesque perhaps, but not without a strong infusion of truth:—

"It seems to me that just such a raid is being made upon the uterus at this time. It is a harmless, inoffensive little organ, stowed away in a quiet place. Simply a muscular organ, having no function to perform save at certain periods of life, but furnishing a capital field for surgical operations, and now-a-days subject to all sorts of barbarity from surgeons anxious for notoriety. Had Dame Nature foreseen this, she would have made it iron-clad. What with burning and cauterizing, cutting and slashing, and gouging, and spitting, and skewering, and pessaring, the old-fashioned womb will cease to exist except in history. The Transactions of the National Medical Association for 1864, have figured one hundred and twenty-three different kinds of pessaries, embracing every variety, from a simple plug to a patent threshing machine, which can only be worn with the largest hoops. They look like the drawings of a turbine water-wheel, or a leaf from a work on entomology. Pessaries, I suppose, are sometimes useful, but here are more than there is any necessity for."

But we have not space to analyze minutely Dr. Buck's discourse, and must dismiss it with the remark that the honor of electing him President of the Society was evidently well bestowed.

Passing by the Address from the President of Dartmouth College,

Dr. Albert Smith's paper on the Abuse of the Topical Treatment of Diseases of the Uterus, Dr. Charles F. P. Hildreth's oration on the "True Practice of Medicine," the Report on Surgery by Dr. A. H. Robinson, and others, all of which are worthy of particular notice, we come to a paper by Dr. A. B. Crosby, on the Significance of Pain, which just now is deserving of special consideration. It is an argument to show the truth of the following propositions:—

"That pain is not an unmixed evil, but is a beneficent gift of God designed for the self-preservation of all animals, and that each is endowed with this sense to an extent only sufficient to insure this result."

"That even in disease pain is not an unmixed evil, but, on the contrary, is one of the most valuable pathognomonic signs."

"That the intensity of pain is largely dependent upon the mental condition of the person suffering."

Of course it cannot be claimed that these propositions are entirely new; but in the search after new truth men are too apt to overlook the old, and need to have it *re*-presented at times to keep them from running into vagaries and extravagances. The essay of Dr. Crosby contains many interesting facts and suggestive thoughts. Its arguments are ingenious, and it gives evidence also of the general culture of the author. A number of curious anecdotes which he relates, illustrative of the want of sensibility of the lower animals to pain, have much significance in connection with the subject of vivisection, although he does not himself mention them with this object. The following instance, which occurred under his own observation, is a case in point:—

"During the bloody battle of the Fair Oaks I saw the fore leg of a horse carried away by a solid shot. He fell but made no noise, and so far as I could see gave no evidence of pain. On the contrary, he soon struggled on to his three legs and commenced feeding. In stooping I saw the stump frequently strike the ground, but the horse gave no signs of disturbance. During the engagement the Federal forces were driven back some two miles before the impetuous onset of the rebel army, and I lost sight of him. Thirty-six hours afterwards, the lost ground having been recovered, I was ordered by Gen. Casey to scour the field with a corps of surgeons and ambulances for the relief of the wounded abandoned on our retreat. Among the first things that fixed my attention was the same horse which had survived the battle, quietly feeding, surrounded by the killed and wounded as they had fallen in the fight. The horse looked in good condition and seemed to pay no attention to the mutilated leg, although the bone protruded through the soft parts and the wound was filled with maggots."

Numerous other instances of similar insensibility are given.

Dr. Crosby's remarks on the significance of pain are practically important. Thus, in the case of young children, he says:—

"The significance of pain in young children might not at first seem to be easily translated, yet, if carefully watched, the signs of pain in infants are quite as constant and less frequently perverted than the same signs in adults. The cry of pain in these little ones is obstinate and long continued. If the cry is smothered and the respiration hurried, we are to look to the thorax for the cause of the pain. When

the cry is husky, the pain is generally due to some catarrhal affection, either of the larynx or trachea. When the pain is sudden and severe, as from the prick of a pin, from colic, from peritonitis, or other abdominal pain, the cry is short and rapid. When the child persists in screaming and rolling the head, the pain is generally located about the brain. It is not uncommon for infants to place their hands on the point of distress, and a physician may often entirely unravel the case by employing pressure over the different organs *seriatim*, at the same time watching the expression of the face. This matter of the relation of pain to the diseases of children is one of great importance, and could be profitably dwelt upon at length would our limits permit."

In conclusion, we may say that Dr. Crosby has sustained his propositions most ably, and his whole essay is worthy of the most careful reading. We regret that space is wanting for a more extended notice of the papers before us; they all contain valuable suggestions and do credit to their authors.

Population of Massachusetts.—We have received the following note from Dr. Allen in reply to Dr. Derby's article in last week's JOURNAL. We cannot forbear the remark that we hardly think Dr. Derby's language deserves the harsh interpretation put upon it in the last sentence:—

In the article of Dr. George Derby, in the MEDICAL JOURNAL of Jan. 17th, referring to a previous article upon the "Increase of Population in Massachusetts," I wish to correct a mistake. In comparing the cities, counties and towns containing the greatest, and the least, of the foreign element, as to the relative number of births and deaths between this class and the American, it was found by the Registration Reports that there were over thirty towns in the State which did not report a single foreign birth. The natural inference was that these towns contained scarce any or no foreign population. The deaths must be composed principally, if not wholly of the American class. Now the whole aggregate number of deaths in these towns by the Registration Reports both for 1864 and 1865 exceeds the number of births. As to the *assertions* of Dr. Derby in respect to some other points in the article referred to, or as to his *charge* impugning the *motives* of the writer, no reply at present is deemed necessary.

Nominations for Brevet Rank in the U. S. A. Medical Department.—(*Concluded from page* 512.)—To be *Colonels* by brevet, Brevet Lieut.-Colonel and Surgeon John J. Milhau, for gallant and meritorious services during the war, to date from March 13, 1865, Brevet Lieut.-Colonel and Surgeon Joseph R. Smith, for meritorious services and devotion to the sick during the prevalence of cholera at Little Rock, Arkansas, to date from November 22, 1866.

To be *Brigadier-Generals* by brevet for faithful and meritorious services during the war, to date from March 13, 1865, Brevet Colonels and Surgeons Charles S. Tripler, Charles McDougall, and Joseph J. B. Wright; also Brevet Colonel and Surgeon William J. Sloan, for meritorious and distinguished services at several military posts in New York Harbor, where cholera prevailed, to date from September

28, 1866; Brevet Colonel and Surgeon Joseph B. Brown, for meritorious and distinguished services at Fort Columbus, New York Harbor, where cholera prevailed, to date from September 28, 1866; Brevet Colonel and Surgeon John J. Milhau, for meritorious and distinguished services at Hart's Island, New York Harbor, where cholera prevailed, to date from September 28, 1866.—*Medical Record.*

Municipal Munificence.—The municipality of Brussels have offered the very handsome sum of sixteen pence a day as a recompense for services rendered by the medical profession during the last epidemic of cholera. M. Vleminckx, a leading practitioner of the city above mentioned, spiritedly writes to the authorities that his brethren could have borne to have been simply thanked, but that they deny the right of any corporation or individual to offer men who have displayed skill, courage and endurance, the paltry remuneration in question.—*Ibid.*

The "Poor Man's Filter."—In the food department of the South Kensington Museum stands the "poor man's filter." It is an ordinary flower-pot, plugged (not tightly) at the bottom with sponge. A layer of coarsely powdered charcoal, about one inch thick, is placed in the bottom of the pot, then another layer of sand of the same thickness, then pebbles, coarse gravel, and stones are placed on the whole. This forms an admirable filter, and one within the reach of the poorest. —*Medical and Surgical Reporter.*

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JANUARY 19th, 1867.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	39	40	79
Ave. mortality of corresponding weeks for ten years, 1856—1866	43.4	38.8	82.2
Average corrected to increased population - - - - -	00	00	90.56
Death of persons above 90 - - - - - - - - -	0	0	0

NOTICE.—In order to continue the uniformity in the practice of commencing a new volume of the JOURNAL annually in the first week of February, twenty-seven numbers are required and will be given in the present volume, and No. 1 of Vol. Lxxvi. will be issued on the 7th of the ensuing month.

PAMPHLETS RECEIVED.—Treatment of Fracture of the Lower Jaw by Interdental Splints. By Thomas Brian Gunning, New York.

MARRIED,—In this city, 13th inst., Artemas I. Fenn, M.D., to Mrs. Frances L. Graves, both of Boston.

DIED,—At Chelsea, after a lingering illness contracted during the war, Dr. John C. Barrington, formerly Assistant Surgeon of the 28th Mass. Vols., and afterwards of the 2d Mass. Heavy Artillery.

DEATHS IN BOSTON for the week ending Saturday noon, Jan. 19th, 79. Males, 39—Females, 40. Accident, 3—apoplexy, 1—disease of the bowels, 1—congestion of the brain, 1—disease of the brain, 7—inflammation of the brain, 1—bronchitis, 1—cancer, 2—consumption, 8—convulsions, 1—croup, 4—debility, 1—diphtheria, 2—dropsy, 2—dropsy of the brain, 4—drowned, 1—erysipelas, 1—exposure, 1—scarlet fever, 4—spotted fever, 1—hæmorrhage (from the ear), 1—infantile disease, 2—disease of the kidneys, 3—inflammation of the lungs, 7—marasmus, 2—old age, 4—peritonitis, 1—puerperal disease, 1—smallpox, 3—disease of the spine, 1—tabes mesenterica, 1—teething, 1—unknown, 5.

Under 5 years of age, 37—between 5 and 20 years, 7—between 20 and 40 years, 16—between 40 and 60 years, 8—above 60 years, 11. Born in the United States, 61—Ireland, 16—other places, 2.